



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,557	01/11/2002	David S. Breed	ATI-290	9120
22846	7590	06/29/2004	EXAMINER	
BRIAN ROFFE, ESQ 11 SUNRISE PLAZA, SUITE 303 VALLEY STREAM, NY 11580-6170			ILAN, RUTH	
			ART UNIT	PAPER NUMBER
			3616	

DATE MAILED: 06/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/043,557

Applicant(s)

BREED, DAVID S.

Examiner

Ruth Ilan

Art Unit

3616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-50 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26, 28-43 and 45-50 is/are rejected.
- 7) ☒ Claim(s) 27 and 44 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. The amendment of April 1, 2004 is acknowledged. An action on the merits follows.

#### ***Claim Rejections - 35 USC § 102***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1, 2, 4, 5-8, 10, 11, 13 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Kasama et al. (US 4,066,415.) Kasama et al. teaches (see Figures 4 and 5) an inflator module for inflating an airbag (18d) including an elongate housing (1d), a uniformly shaped propellant extending longitudinally (4d) and an ignitable coextensive coating on the propellant (7d). Also taught is an opening (see Figure 4, 2d) which is elongate, as broadly claimed, the nozzle has a length dimension in the direction from left to right of Figure 4, and can be said to be oriented in the same direction as the propellant, since they share a common axis, for instance. Regarding claims 8, 10, and 11 the coating is arranged coextensive with and on the portions of the propellant not in contact with the housing, and as such the propellant is completely enclosed by the coating and the housing. Regarding claims 6 and 13, if the opening of the housing is considered to be the annular opening at the end of housing 1d, then as broadly claimed, then the outer screen 17d is adjacent the opening, and faces the coating, and a chamber (annular) is defined between the screen and the propellant.

#### ***Claim Rejections - 35 USC § 103***

Art Unit: 3616

4. The indicated allowability of claims 9, 14, 23, and 47 is withdrawn in view of the newly discovered reference(s) to Schafer (DE 39 32 576 A1). Rejections based on the newly cited reference(s) follow.

5. Claims 1, 2, 4, 5, 7-11, 14, 15, 39, 40, 42, 43, and 45-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin (US 3,606,377) in view of Schafer (DE 39 32 576 A1 and attached English language abstract) Martin teaches (Figures 9 and 10) two embodiments of an inflator module for inflating an airbag including an elongate housing (38) and an elongate block of propellant with a uniform cross section in a longitudinal direction (22.) The housing includes an elongated opening (108) oriented in the same direction as the propellant. Regarding claim 39, the elongate housing includes bottom and side walls (as seen in Figure 10, or in an alternate embodiment, in Figure 8) and opposed lateral end walls (26) and the propellant is along the entire length of the bottom and side walls. Regarding claim 42, the opening is opposite the bottom wall. Martin fails to teach an ignitable material coating the propellant. Schafer teaches that it is known to coextensively coat a propellant with an ignitable material in order to speed up the ignition and enhance ignition so that the gas generator is efficient and reliable and can release large amounts of gas in a short time. It would have been obvious to one having ordinary skill in the art at the time of the invention to coat the surface of Martin with an ignitable material, as taught by Schafer in order to enhance the ignition process. Regarding claims 8 and 39, Schafer teaches coating the surface of the propellant that forms a channel, and as such someone of ordinary skill would coat the top surface of Martin, in order to allow propagation of the ignition. Regarding claims 9,

Art Unit: 3616

and 47, Martin in view of Schafer would perform in the claimed fashion, that is the ignitable coating would burn quickly, igniting the propellant which would burn from the surface toward the wall.

6. Claims 3, 6, 12, 14, 16-19, 21-25, 28 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Schafer as applied above, and further in view of Cuevas (US 5,058,921.) Regarding claim 6, Martin is discussed above, and fails to teach an elongate screen arranged adjacent the opening and opposite the propellant. Regarding the limitation "opposite", this term is sufficiently broad as to encompass orientations such as "facing." Cuevas teaches that it is known to provide elongate screens (see Figure 4a and 2) adjacent discharge openings in inflator housings to provide a means to cool and filter the hot combustion products during the inflation process so as to protect the air bag and occupants (see Cuevas, col. 8, lines 20-41.) It would have been obvious to one having ordinary skill in the art at the time of the invention to include a screen, as taught by Cuevas, with the inflator housing of Martin, so as to protect the airbag and occupants against the possibility of hot particulate burning the airbag during inflation. Regarding claim 3, Martin does not disclose the total length of the propellant, since the drawing that shows the length is broken (see Figure 9). However Martin does suggest that a long surface is useful because it provides for rapid and efficient combustion to inflate the airbag quickly (see Martin, col. 5, lines 59-69.) Cuevas teaches a propellant block that has a length that is greater than 10 times the width. It would have been obvious to one having ordinary skill in the art at the time of the invention to include a propellant block length that exceeds 10 times the width, as

Art Unit: 3616

taught by Cuevas, in order to provide for rapid and efficient combustion to inflate the airbag quickly. Regarding claim 16, for those elements not previously discussed, Martin does not specifically show an airbag housing or a cover, since the air bag systems are shown as schematic locations. Cuevas teaches a housing (14) and a cover (12) used to protect the internal components of the system (airbag.) It would have been obvious to one having ordinary skill in the art at the time of the invention to include an airbag housing and cover, as taught by Cuevas, with the airbag system of Martin, in order to provide a complete system for the airbag that protects the air bag from damage.

7. Claims 29-32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Martin (US 3,606,377) in view of Witte (US 5,333,899.) Martin is discussed above, and teaches all elements of the claimed invention except does not teach that the housing and inflator is oriented in the longitudinal direction, or that the air bag is arranged to inflate along one of the left or right sides of the vehicle. Witte teaches such a mounting location as being useful to protect occupants during a lateral collision. It would have been obvious to one having ordinary skill in the art to orient the inflator housing of Martin in the manner taught by Witte, in order to protect vehicle occupants during a lateral accident. Regarding claim 30 the Examiner takes Official Notice that it is known in the vehicle safety art to provide air bags in the location of the B-pillar to protect occupants in case of a roll-over or side impact. It would have been obvious to one having ordinary skill in the art at the time of the invention to place the air bag module of

Art Unit: 3616

Martin along the B-pillar, since Martin teaches that the airbag system is useful in a variety of locations, and since it is known to place modules along the B-pillar.

8. Claims 33-38 rejected under 35 U.S.C. 103(a) as being unpatentable over Martin in view of Witte as applied above, and further in view of Schafer. Martin in view of Witte fails to disclose the claimed coated igniter material. Schafer teaches that it is known to coextensively coat a propellant with an ignitable material in order to speed up the ignition and enhance ignition so that the gas generator is efficient and reliable and can release large amounts of gas in a short time. It would have been obvious to one having ordinary skill in the art at the time of the invention to coat the surface of Martin with an ignitable material, as taught by Schafer in order to enhance the ignition process. Schafer teaches coating the surface of the propellant that forms a channel, and as such someone of ordinary skill would coat the top surface of Martin, in order to allow propagation of the ignition.

***Allowable Subject Matter***

9. Claims 20, 26, 27, and 44 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

10. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 3616

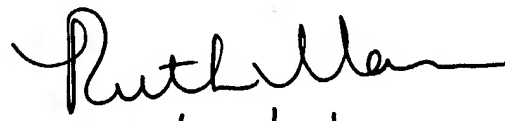
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruth Ilan whose telephone number is 703-306-5956.

The examiner can normally be reached on Monday-Friday, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Dickson can be reached on 703-308-2089. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ruth Ilan  
Primary Examiner  
Art Unit 3616

  
6/23/04

RI  
6/23/04